AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes changes to Fig. 1. This sheet replaces the original sheet including Fig. 1.

Attachments: Replacement Sheet of FIG. 1
Redlined Sheet Showing Changes to FIG. 1

REMARKS

Claims 1-6, 8, 10-15 and 17 are pending in this application. In an Office Action dated February 28, 2006 (OA), the Examiner rejected claims 1-6, 8, 10-15, and 17. In this response, Applicants add new claim 18. Applicants respectfully traverse the rejection and request reconsideration of the rejected claims based on the following remarks.

In addition, Applicants do not automatically agree with or acquiesce to the Examiner's characterization of the claims or the prior art, even if those characterizations are not addressed herein.

Amendments to the Drawings

Applicants amend Fig. 1 to be more consistent with the other Figures. In particular, Applicants amend Fig. 1 to properly include the stub holder 4 as shown in Fig. 2 and described in the specification at page 6, paragraph 19 and page 7, paragraph 21. Further, Applicants amend Fig. 1 to properly indicate that lens system 6 should point to the circular lens as shown in Figs 2 and 5B. Furthermore, Applicants amend Fig. 1 to clarify that item 3 points to the fiber stub and not the core of the fiber stub, which is consistent with Figs. 3 and 5A.

Claim Rejections under 35 U.S.C. § 103

MPEP § 2142 requires to establish a prima facie case of obviousness that (1) the prior art reference must teach or suggest all claimed elements, (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, and (3) there must be a reasonable expectation of success.

The Examiner rejected claim 1-3 and 17 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,631,991 (Cohen) in view of U.S. Patent No. 5,031,984 (Eide) and 6,851,870 (Deng). Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claims 1-3

Claim 1 recites "a lens system oriented with respect to the multi-mode optical fiber stub to focus an optical beam exiting the multi-mode optical fiber stub onto an active area of an optical detector...wherein the optical detector is offset from the optical axis of the multi-mode optical fiber," (emphasis added). The Examiner stated that "[a]lthough the image sensor (31) of Deng is not offset from the optical fiber (20), as indicated by the applicants, Deng does teach an optical detector (element 30 (B6), Figures 1-6, and column 7, lines 22-24) offset from the optical axis of an optical fiber (element 20 (B4) inserted in aperture 11, Figures 1-6, and column 4, lines 43-67)."

But the Examiner's use of functional element 30 to be an optical detector is inconsistent within claim 1. If functional element 30 is considered to be the optical detector that is offset from optical fiber 20, the functional element 30 would not be aligned to receive a signal from the optical fiber 20. Deng discloses that the image sensor 31 or functional element 30 must be aligned to receive the signal from optical fiber 20 by stating:

> The present invention relates to a method for measuring and assembling transceiver optical sub-assembly (OSA), in which an image sensor **is aligned** with a fiber aperture on a housing of the optical sub-assembly and set to focus on a fiber coupling plane in the housing, so as to detect a light spot presented on the fiber coupling plane by a laser beam emitted from a functional element through the lens, or an image of a light-emitting area or a receiving area of the functional element presented on the fiber coupling plane via the lens. By adjusting the size and position of the light spot or the image on the fiber coupling plane, the

> functional element is precisely aligned and then fixed in the housing. With the method, measuring procedures for the OSA are simplified and the transmission bandwidth for the optical fiber is optimized, enabling an increased rate of good yield of the finished OSA. (emphasis added)

Deng at col. 1 ll. 7-23.

More specifically, Deng discloses that the image sensor 31 or functional element 30 must be aligned with the fiber aperture A3 that holds an optical fiber 20 in place so the image sensor 31 or functional element 30 can detect a light spot presented on the fiber coupling plane by a laser beam emitted from an optical fiber. Thus, if Deng's image sensor 31 or functional element 30 is offset from optical fiber 20, then Deng's optical fiber could not focus an optical beam onto the active area of image sensor 31 or functional element 30, the focusing being recited in claim 1 of the present application. Further, Applicants respectfully submit that Deng's functional element 30 is used to assist in aligning the image sensor 31 with the optical fiber 20. If Deng's functional elements 30 are aligned properly so that a light beam provided by functional element 30 goes through the lens to the fiber coupling plane 21, the image sensor 31 could only be properly aligned with optical fiber 20 to receive the communication.

Therefore, Deng does not disclose "a lens system oriented with respect to the multi-mode optical fiber stub to focus an optical beam exiting the multi-mode optical fiber stub onto an active area of an optical detector...wherein the optical detector is offset from the optical axis of the multi-mode optical fiber," (emphasis added). Further, as acknowledged by the Examiner, Cohen fails to overcome the deficiency of Deng. Furthermore, Eide does not overcome the deficiency of Deng. Therefore, Applicants respectfully submit that claim 1 is patentable over the cited prior art.

Claims 2 and 3 depend on claim 1 and are patentable for the same reasons as claim 1.

Claim 17

Claim 17 recites "a split sleeve positioned over a portion of the multi-mode optical fiber stub, the split sleeve being capable of positioning a single-mode optical fiber to optically couple with the multi-mode optical fiber stub."

The Examiner equates Cohen's ferrule 6 as being a sleeve and then states that "Cohen does not teach that the multimode optical fiber stub is optically coupled with a single mode optical fiber...Eide teaches a single-mode optical fiber (14) optically coupled with a multimode optical fiber stub (16)." OA at page 6.

But Applicants respectfully submit that Cohen's ferrule appears to be part of the fiber stub, appears limited to only a single fiber, and that Cohen is silent with respect to using ferrule 6 to explicitly couple a single-mode optical fiber and the multi-mode fiber stub. Further, Eide discloses connecting a single-mode optical fiber with a multi-mode fiber stub **only** and does not describe using a sleeve to couple the two optical fibers. Thus, Applicants respectfully submit that the combination of Cohen and Eide fail to disclose "a split sleeve positioned over a portion of the multi-mode optical fiber stub, the split sleeve being capable of positioning a single-mode optical fiber to optically couple with the multi-mode optical fiber stub."

Claims 4-6

The Examiner rejected claims 4-6 under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Eide and Deng further in view of U.S. Publication No. 2004/0159776 (Richard). Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claims 4-6 depend on claim 1. As stated above, Cohen in view of Eide and Deng fail to disclose "a lens system oriented with respect to the multi-mode optical fiber stub to focus an optical beam exiting the multi-mode optical fiber stub onto an active area of an optical detector...wherein the optical detector is offset from the optical axis of the multi-mode optical fiber." Richard fails to overcome the deficiency of Cohen, Eide, and Deng regarding claim 1. Thus, Applicants submit that claims 4-6 are patentable for at least the same reasons as claim 1.

Claim 8

The Examiner rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Eide and Deng further in view of U.S. Patent No. 5,737,467 (Kato). Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claim 8 depends on claim 1. As stated above, Cohen in view of Eide and Deng fail to disclose "a lens system oriented with respect to the multi-mode optical fiber stub to focus an optical beam exiting the multi-mode optical fiber stub onto an active area of an optical detector...wherein the optical detector is offset from the optical axis of the multi-mode optical fiber." Kato fails to overcome the deficiency of Cohen, Eide, and Deng regarding claim 1. Thus, Applicants submit that claim 8 is patentable for at least the same reasons as claim 1.

Claims 10-13

The Examiner rejected claims 10-13 under 35 U.S.C. § 103(a) as being unpatentable over Eide in view of Cohen. Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claim 10 recites "coupling a light beam from a single-mode optical fiber into a multi-mode fiber stub via a sleeve, wherein the sleeve aligns the single-mode optical fiber and the-multi-mode fiber stub," (emphasis added). The Examiner acknowledged that Eide does not teach a sleeve wherein the sleeve aligns the single-mode optical fiber and the multi-mode fiber stub. OA at page 9. The Examiner then equates Cohen's ferrule 6 as being a sleeve when it is fact part of the fiber stub.

But Applicants respectfully submit that Cohen's ferrule 6 is limited to only a single fiber and Cohen is silent with respect to using ferrule 6 to explicitly couple a single-mode optical fiber and the multi-mode fiber stub. Further, Eide discloses connecting a single-mode optical fiber with a multi-mode fiber stub **only** using an adhesive at 3:58-61 and does not describe using a sleeve to couple the two optical fibers. Thus, Applicants respectfully submit that the combination of Eide and Cohen would not disclose "coupling a light beam from a single-mode optical fiber into a multi-mode fiber stub via a sleeve, wherein the sleeve aligns the single-mode optical fiber and the-multi-mode fiber stub," (emphasis added).

Therefore, by the reasons set forth above, Applicants respectfully submit that claim 10 is patentable over the cited prior art.

Claim 11 is dependent upon claim 10 is patentable for at least the same reasons as claim 10.

Claim 12 recites "...a sleeve for coupling an optical fiber and a multi-mode fiber stub; wherein the sleeve aligns the optical fiber and the multi-mode fiber stub...," which is similar in scope to claim 10 and claim 12 is patentable for at least the same reasons as claim 10.

Claim 13 is dependent upon claim 12 is patentable for at least the same reasons as claim 12.

Claim 14

The Examiner rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Cohen in view of Richard. Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claim 14 recites "press fitting a multi-mode fiber stub into a stub holder." The Examiner states that "Cohen teaches...press fitting a multimode fiber stub (Figure 1, element 7) into stub holder (ferrule 6), positioning a split sleeve (part of housing 2 extending along ferrule 6) over a portion of the multimode fiber stub." OA at page 11.

But Applicants respectfully submit that ferrule 6 having optical fiber 7 and core 8 is the same or is similar to a fiber stub. Cohen does not teach press fitting a fiber stub into another fiber stub. If the Examiner determines that ferrule bore 5 is then the stub holder, the Examiner must then consider how to press fit ferrule bore 5 into housing 2. In addition, Richards fails to overcome the deficiencies of Cohen. Thus, Cohen in view of Richards fails to disclose "press fitting a multi-mode fiber stub into a stub holder." Therefore, Applicants respectfully submit that claim 14 is allowable over the cited prior art.

Claim 15

The Examiner rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Cohen in view of Richard and Eide. Applicants respectfully traverse the rejection and request the Examiner to withdraw the rejection based on the arguments provided below.

Claim 15 depends on claim 14. As stated above, Cohen in view of Richard fail to disclose "press fitting a multi-mode fiber stub into a stub holder." Eide fails to overcome the

deficiency of claim 14. Thus, Applicants submit that claim 15 is patentable for at least the same reasons as claim 1.

New Claim

New claim 18 is added. New claim 18 recites "...a lens system oriented with respect to the multi-mode optical fiber stub to focus an optical beam exiting the multi-mode optical fiber stub onto an active area of an optical detector, wherein the optical detector is offset from the optical axis of the multi-mode optical fiber." As shown above in the remarks presented for claim 1, the cited prior art fails to disclose the features of claim 18. Therefore, Applicants respectfully submit that claim 18 is patentable over the prior art of record.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: May 30, 2006

By: _____
Gary J. Edwards
Reg. No. 41,008

Attachments: Replacement Sheet of FIG. 1
Redlined Sheet Showing Changes to FIG. 1

EXPRESS MAIL LABEL NO.
EV 860818111 US

REDLINE SHEET

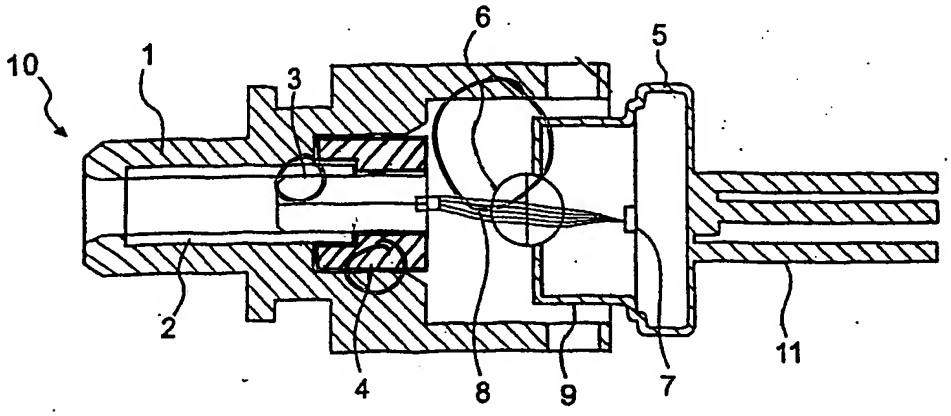

FIG. 1

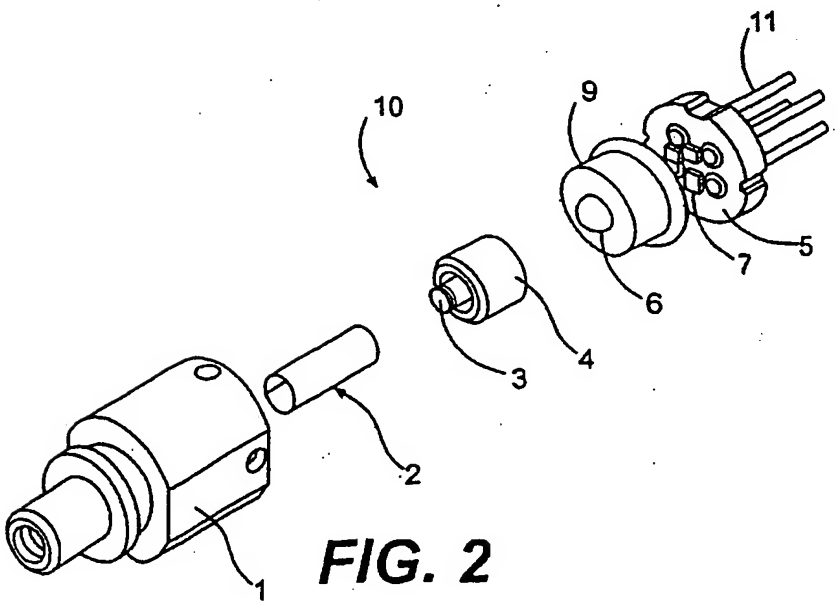

FIG. 2